



Dart Aerospace Ltd.
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K6A 1K7
Canada

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D135-751-011
Job Sheet 191609



Part No: D135-751-011

Job Qty: 1 pcs

Part Name: Skidtube with Standard Wearplates Fits LH or RH



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 3/5/19

Job Tracking No:

Due Date: 3/22/19

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG DSI 9661 REV A, D3507 REV D IPP Rev:A 44353 New Issue JLM IPP Rev:B 06-12-18 As per Rev B JLM IPP Rev:C 07-12-11 ECN 1036 as per revB DD IPP Rev D 08.11.04 Added DT9431 to sequence 5 EC verf DD IPP Rev E 10.02.22 per PAR 09-043 EC verified: DD IPP Rev:F 10.06.09 remove seq110 DD verf:EC IPP Rev G 10.09.17 added D3507-1-bent EC verified:DD IPP REV:H 13.12.11 ECN13-619/ CHG002 DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	3/22/19	3/22/19	0.00	0.00	Start Up Skid tubes-1		
120	Skid tubes	1 pcs	3/22/19	3/22/19	0.00	0.80	Skid tubes-1		
140	QC	1 pcs	3/22/19	3/22/19	0.00	0.00	QC5		
150	HandFinish	1 pcs	3/22/19	3/22/19	0.00	0.33	HandFinish1		
160	QC	1 pcs	3/22/19	3/22/19	0.00	0.00	QC7-1		
170	Skid tubes	1 pcs	3/22/19	3/22/19	0.00	1.00	Skid tubes-1		
180	QC	1 pcs	3/22/19	3/22/19	0.00	0.00	QC10		
185	HandFinish	1 pcs	3/22/19	3/22/19	0.00	0.10	HandFinish6		
187	QC	1 pcs	3/22/19	3/22/19	0.00	0.00	QC7-1		
190	Skid tubes	1 pcs	3/22/19	3/22/19	0.00	0.77	Skid tubes-1		
200	QC	1 pcs	3/22/19	3/22/19	0.00	0.00	QC5		
210	HandFinish	1 pcs	3/22/19	3/22/19	0.00	0.08	HandFinish2		
215	Outsource	1 pcs	3/22/19	3/22/19			ATE003-VC	5	
220	SprayPaint	1 pcs	3/22/19	3/22/19	0.00	0.25	Spray Paint		
230	QC	1 pcs	3/22/19	3/22/19	0.00	0.00	QC14		
260	HandFinish	1 pcs	3/22/19	3/22/19	0.00	0.74	HandFinish4		
270	QC	1 pcs	3/22/19	3/22/19	0.00	0.00	QC5		
280	Packaging	1 pcs	3/22/19	3/22/19	0.00	0.00	Packaging1-1		
290	QC	1 pcs	3/22/19	3/22/19	0.00	0.00	QC4		
300	Packaging 3-1 - Stock - B4B	1 pcs	3/22/19	3/22/19	0.00	0.00	Packaging 3 - 1 - B4B		
							Packaging 3 - 2 - B4B		
							Packaging 3 - 3 - B4B		
							Packaging 3 - 4 - B4B		
							Packaging 3 - 5 - B4B		
							Packaging 3 - 6 - B4B		
							Packaging 3 - 7 - B4B		
							Packaging 3 - 8 - B4B		
							Packaging 3 - 9 - B4B		

S160160

F9072

DAS 40 9-89

DAS 15 9-89

MAY 03 2019 68 9-89
MAY 06 2019

JRB
JAB



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Container No: S160160



Part: D135-751-011

Job No: 191609

Serial No/Batch: S160160

Revision:

Inspector:

Exp Date:

Instructions: FAA STC SR01709SE 18/10/17, TC LoA RDIMS-9661680-v1 14/07.

				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
305 DC	1 pcs	3/22/19	0.00 0.00	DC	DAS 21 JUN 16 2019
310 QC 21 - FG	1 pcs	3/22/19	0.00 0.00	QC 21 - FG - 21	DAS 21
				QC 21 - FG - 70	21
				QC 21 - FG - 53	9-55

Part Op 120 - 1-Cut Aft end as per dwg D3507 3-Drill Aft & Fwd Cap holes using DT8678 & DT8901 4-Locate DT8870 & Drill
 Descriptions: Ground wire hole on top of Tube. 6-Locate DT8870 with #30 cleco in Ground wire hole ,then Pilot Drill all X-Bolt holes
 using #30" drill. ****DO NOT OPEN AFT CAP HOLES***** 7-Open crossbolt holes to 0.3125" (3 per side). Drill pilot holes
 for wearplates using Dt8868, Use DT8892 FOR REAR WEARPLATE HOLES. 8-Open six rear wearplate holes using
 DT8892. Open all wearplate holes to 0.297" 9-Open ground wire hole .297" section E-E 10-Open Aft & Fwd Cap holes
 using .208" drill. 11-Bore out aft end of tube as per Dwg D3507 & Detail "B". 12- Section G-G holes must be laid out
 manually, open to #30. 13-Debur holes.
 170 - 1-Open X-Bolt holes to .375" (1 Places) & .500"(2Places) as per Dwg D3507. and section G-G to .750" (2 places) 2-
 Counter Sink X-BOLT holes as per Dwg D3507 3-Debur and blow out chips from inside of tube. 4-Bond web as per Dwg
 D3507 & QSI 015 start time : _____ end time: _____ 5-Weld x-bolt spacers as per Dwg D3507
 and Detail C-C & D-D and G-G 7-Drill Rivet Holes as per Dwg D3507 Using Dt8871A&B 8-Debur Rivet holes.
 185 - RE-ALODINE ONLY
 190 - 1-Rivet D3506-1/-3 as per Dwg D3507.
 210 - Touch-up alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.
 220 - 1- Apply Primer as per QSI 005 4.2.1.3.3 and dwg A/R Primer Batch: S 163577 2- Paint two coats of
 White paint as per QSI 005 4.2 and dwg A/R Paint Batch: S 166819
 260 - 1- Install Wearplate & Ground Wire inserts as per Dwg D3507. 1-Inspect for Foreign objects 2-Install Fwd & Aft caps
 as per Dwg D3507 And Detail "A" & "B" 3-Install Wearplates as per Dwg D3507 , Note:Install (1) Bolt and (1) washer on
 Ground Wire insert on top of tube Do not Install Scews where indicated on Dwg(Note #6) 4-assemble o'ring to plug as per
 dwg D3492 and apply o'ring lube 5- Wing Walk as per Dwg D3507 and QSI 005 4.4 Batch: _____
 300 - (Identify as per dwg & Stock Location: _____) Identify and pack for shipping as per PPP D135-751-011 PPP
 Rev: _____
 305 - Photocopy bluefile & type labels per PPP D135-751-011 CHG002
 310 - QC21- Final Inspection - Work Order Release

Job BOM

009563

Part / Item	Component Name	Quantity	Operation	Container
D3507-1-BENT	Skidtube Assembly EC135	1 pcs (1 ea)	90-Start up Operation	5145108
D3504-1	Crossbolt Spacer	2 pcs (2 ea)	170-Skidtubes	5146029
D3504-3	Crossbolt Spacer	1 pcs (1 ea)	170-Skidtubes	8105604
D3504-5	Crossbolt Spacer	2 pcs (2 ea)	170-Skidtubes	5091959
D3505-1	Web	1 pcs (1 ea)	170-Skidtubes	5141185
D3506-1	Doubler	4 pcs (4 ea)	190-Skidtubes	5149088
D3506-3	Doubler	2 pcs (2 ea)	190-Skidtubes	5154442
MS20601-AD4W3	Rivet	12 Ea (12 ea)	190-Skidtubes	5160312
ALS4-1032-225	Rivnut	1 Ea (1 ea)	260-HandFinish	5059809
ALS7-1032-130	Rivnut	38 Ea (38 ea)	260-HandFinish	5045669
AN3C4A	Bolt	31 Ea (31 ea)	260-HandFinish	5143675 (24)
AN3C5A	Bolt	2 Ea (2 ea)	260-HandFinish	5156446
AN526C1032R10	Screw	2 Ea (2 ea)	260-HandFinish	5071664
D2965	Cap	1 pcs (1 ea)	260-HandFinish	5045487
D2965-3	Cap	1 pcs (1 ea)	260-HandFinish	5126369
D3492-1	Plug	4 pcs (4 ea)	260-HandFinish	5148529
D3492-3	Plug	4 pcs (4 ea)	260-HandFinish	5137512
D3492-7	Plug	2 pcs (2 ea)	260-HandFinish	5148611
D4918-047	Wearplate Aft	1 pcs (1 ea)	260-HandFinish	5153202
D4918-1	Wearplate Fwd	1 pcs (1 ea)	260-HandFinish	5148276
D4918-3	Wearplate Center Fwd	1 pcs (1 ea)	260-HandFinish	5170022
D4918-5	Wearplate Center Aft	1 pcs (1 ea)	260-HandFinish	5148688
NAS1149C0332R	Washer	33 Ea (33 ea)	260-HandFinish	5140169
NAS1611-007	O-Ring	2 Ea (2 ea)	260-HandFinish	5108697
NAS1611-010	O-Ring	4 Ea (4 ea)	260-HandFinish	5106797
NAS1611-013	O-Ring	4 Ea (4 ea)	260-HandFinish	5106791
AN3C4A	Bolt	8 Ea (8 ea)	280-Packaging	5090636
D3512-041	Wearplate	2 pcs (2 ea)	280-Packaging	5177240
NAS1149C0332R	Washer	8 Ea (8 ea)	280-Packaging	5174158

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D3507-1-BENT	1	4	0
170-Skidtubes	D3504-1	2	28	0
	D3504-3	1	6	0
	D3504-5	2	14	0
190-Skidtubes	D3505-1	1	14	0
	D3506-1	4	29	0
	D3506-3	2	22	0
	MS20601-AD4W3	12	496	0
260-HandFinish	ALS4-1032-225	1	954	0
	ALS7-1032-130	38	1,099	0
	AN3C4A	31	2,098	0
	AN3C5A	2	1,480	0
	AN526C1032R10	2	65	0
	D2965	1	27	0
	D2965-3	1	9	0
	D3492-1	4	93	0
	D3492-3	4	80	0
	D3492-7	2	26	0
	D4918-047	1	12	0
	D4918-1	1	8	0
	D4918-3	1	6	0
	D4918-5	1	5	0
	NAS1149C0332R	33	5,625	0
	NAS1611-007	2	244	0
	NAS1611-010	4	443	0
	NAS1611-013	4	116	0
280-Packaging	AN3C4A	8	2,098	0
	D3512-041	2	2	0
	NAS1149C0332R	8	5,625	0

Part Specifications

Specifications could not be found.

Plex 3/5/19 11:20 AM Dart.lajeunesse.marie

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

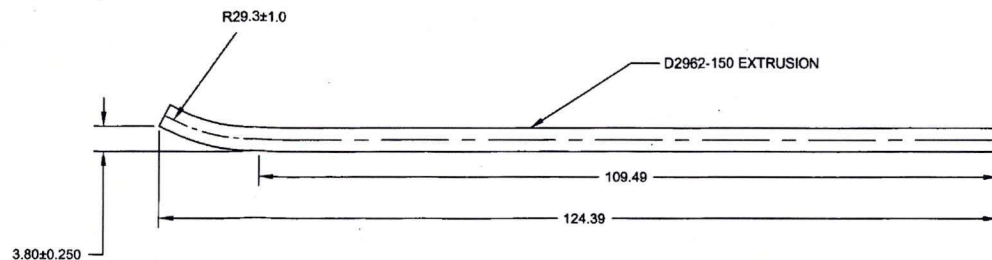
Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor		
			QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

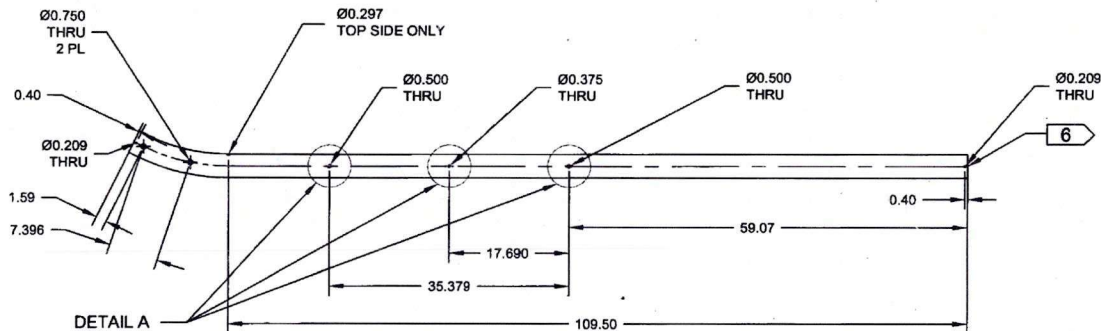
Qty	Part Number	Description
X	D3507-041	SKIDTUBE ASSEMBLY
1	D2962-150	EXTRUSION
1	D2965	CAP
1	D2965-3	CAP
4	D3492-041	PLUG ASSEMBLY
4	D3492-043	PLUG ASSEMBLY
2	D3492-047	PLUG ASSEMBLY
2	D3504-1	CROSS BOLT SPACER
1	D3504-3	CROSS BOLT SPACER
2	D3504-5	CROSS BOLT SPACER
1	D3505-1	WEB
4	D3506-1	DOUBLER
2	D3506-3	DOUBLER
1	D4918-1	WEARPLATE
1	D4918-3	WEARPLATE
1	D4918-5	WEARPLATE
1	D4918-047	WEARPLATE
38	AELS-1032-130	INSERT
1	AELS-1032-225	INSERT
31	AN3C4A	BOLT
2	AN3C5A	BOLT
2	AN526C1032-10	SCREW
33	AN960C10L	WASHER
12	MS20801AD4W3	RIVET

GENERAL NOTES:

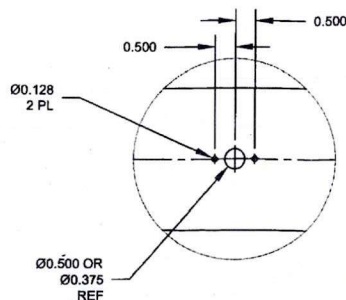
- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3505-1 WEB.
STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2.
OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3.
BLACK ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTERLINE PER DART QSI 005 4.4 (OPTIONAL)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) DIMENSIONS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART B/N PER DART QSI 044 6.4 (VIBRATING STYLUS) ON I.D. OF TUBE
- 7) WEIGHT: 24.1 LB (FROM IIN-D135-751)
- 8) WELDING TO BE DONE PER DART QSI 004
- 9) INSERT D3505-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING
- 10) USE DART DRILL TEMPLATE DT8898 TO LOCATE AND DRILL Ø0.297 HOLES (38 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION C-C (38 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/-291.
- 11) DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED LOCATIONS



D3507-1 BENDING/CUTTING DETAIL

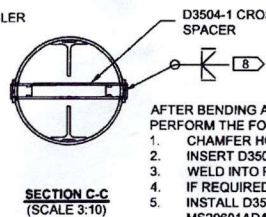


D3507-1 DRILLING DETAIL



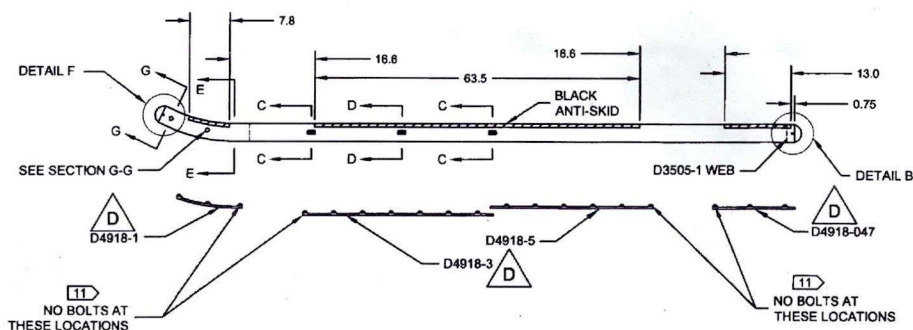
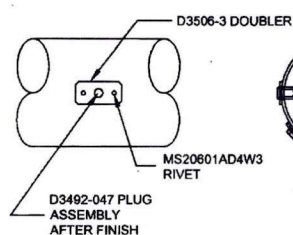
DETAIL A
TYP, 6 PL
SCALE 3:10

D	REMOVE D3558-X GASKETS, D4918-X WAS D3508-X REVISE FINISH TO ADD PAINT AS THE PREFERRED FINISH. REVISED NOTES	DW	13.08.30
C	ADD D3504-5, FOR SKID GEAR DEFLECTOR; CHANGE FWD CAP BOLT TO AN526C1032-10 SCREW	DC	07.09.19
B	ADD GASKET, CHANGE HARDWARE MAT'L	PH	06.11.01
A	NEW ISSUE	PH	06.04.21
REV.	DESCRIPTION	BY	DATE
DESIGN	DW	DART AEROSPACE USA, INC	
DRAWN	DW	KENT, WA	
CHECKED	JP	DRAWING NO.	REV. D
MFG. APPR.	JP	D3507	SHEET 1 OF 2
APPROVED	JP	TITLE	SCALE
DE APPR.	JP	EC 135 SKIDTUBE	NTS
DATE	13.08.30	COPYRIGHT © 2013 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRELIMINARY AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

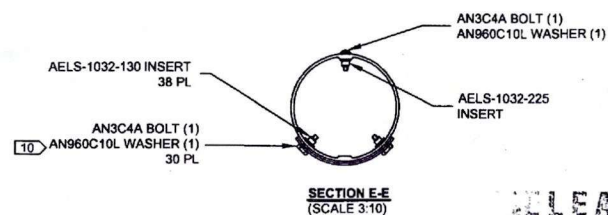
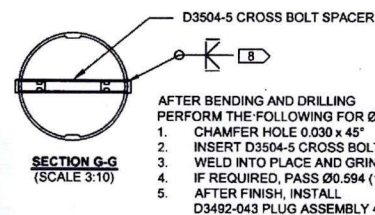
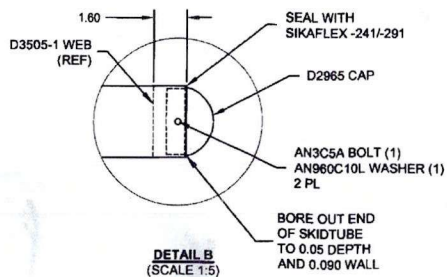
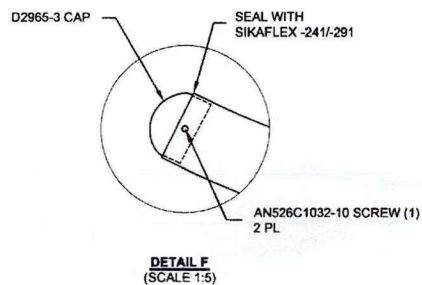


**AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.500 HOLES ONLY**

- 1. CHAMFER HOLE 0.030 x 45°**
- 2. INSERT D3504-1 CROSS BOLT SPACER 2 PL**
- 3. WELD INTO PLACE AND GRIND FLUSH**
- 4. IF REQUIRED, PASS Ø0.404 (Y" DRILL) THRU HOLE**
- 5. INSTALL D3506-1 DOUBLER 4 PL USING MS20601AD4W3 RIVET 8 PL**
- 6. AFTER FINISH, INSTALL D3492-041 PLUG ASSEMBLY 4 PL**



D3507-041 ASSEMBLY DETAIL



DESIGN	DW	DART AEROSPACE USA, INC	
DRAWN	DW	KENT, WA	
CHECKED	GP	DRAWING NO.	REV. D
MFG. APPR.	<i>[Signature]</i>	D3507	SHEET 2 OF 2
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	EC 135 SKIDTUBE	NTS
DATE	13.08.30	COPYRIGHT © 2013 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS RELEASED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	